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## PACIFIC WEST REGIONAL OFFICE Memorandum

L7617 (PWRO-PP)

23 DEC 2005

### Memorandum

To: Acting Superintendent, Mojave National Preserve

From: Acting Regional Director, Pacific West

Subject: Environmental Compliance for Translocation of Desert Bighorn Sheep from Old Dad\Kelso Peak to Eagle Crags (NAWS-China Lake)

The finalized *Finding of No Significant Impact* (FONSI) for this interagency wildlife management project is approved. To complete this process, at the time when the park announces the decision, a copy of the approved FONSI should be made available to all parties that received or commented on the supporting environmental assessment.

*Patricia L. Neubacher*

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Attachment

Finding Of No Significant Impact  
Translocation of Desert Bighorn Sheep from Mojave National Preserve  
to the Naval Air Weapons Station, China Lake, California

December 2005

**Purpose and Need** – The California Department of Fish and Game (CDFG) proposes to augment a population of desert bighorn sheep at Eagle Craggs that currently has a skewed sex ratio. CDFG would translocate up to 15 desert bighorn ewes (*Ovis canadensis nelsoni*) from the Old Dad Mountain and Kelso Peak of Mojave National Preserve (Mojave NP) to Eagle Craggs, a non-contiguous segment of land administered by the Department of the Navy on the Naval Air Weapons Station at China Lake.

Desert bighorn sheep were reintroduced into the Eagle Craggs Mountains on the NAWS South Range in 1983 and 1985. Although the majority of these reintroduced animals remained in the Eagle Craggs, a number of sheep were lost to emigration, predation, and accidents. During the 1990's census flights continued to document a stable herd of 20 to 25 individuals. Animals appeared healthy and the herd appeared to comprise a normal array of older and younger, male and female animals. Aerial census data collected in 2003 revealed the presence of 17 rams and two ewes. Limited surveys of some nearby mountain ranges did not locate a separate population composed primarily of female sheep.

The CDFG has identified a need to augment the existing population to correct the skewed sex ratio and increase the reproductive potential of this herd. CDFG has also identified a need to routinely monitor the newly released animals to determine daily and seasonal movements. If the newly released radio-collared sheep also establish themselves in another nearby area the radio collars will allow personnel to monitor their location, distribution, and interaction with the male dominated group remaining in the Eagle Craggs. Additional telemetered females will enhance the probability of locating other, non-collared females in the Eagle Craggs because mountain sheep segregate by sex during the majority of the year.

**Alternatives Evaluated** - Alternative B is the Selected Alternative; there are no changes to what was identified and analyzed as the proposal in the Environmental Assessment (EA). This alternative provides for five to 15 desert bighorn ewes to be captured in the Old Dad/Kelso Peak area of Mojave NP and transported for release in the Eagle Craggs area of the Naval Air Weapons Station at China Lake. The Old Dad/Kelso Peak herd is one of the most enduring herds initiated by CDFG. Rough population estimates are consistently higher than for other herds in the desert region. The Old Dad/Kelso Peak herd has a high probability of recovery from a culling of ewes. At the other end, the Eagle Craggs herd will benefit from an infusion of ewes to more equitably shift the gender balance of the population.

Alternative B is also determined to best meet the criteria of the Environmentally Preferable alternative. Environmentally preferable is defined as "the alternative that will promote the national environmental policy as expressed in the National Environmental Policy Act's Section 101. Ordinarily, this means the alternative that causes the least damage to the biological and physical environment; it also means the alternative which best protects,

preserves, and enhances historic, cultural, and natural resources" (Forty Most Asked Questions Concerning Council on Environmental Quality's National Environmental Policy Act Regulations, 1981). Alternative B will have less of an impact to the Old Dad/Kelso Peak herd while potentially benefiting the Eagle Crag herd.

Alternative A is the "No Action" Alternative. Under this alternative, no action would be taken to alter the desert bighorn herds in Mojave National Preserve or Eagle Crag. While the Old Dad/Kelso Peak herd would remain unaffected, the Eagle Crag herd would most likely continue to decline and, with little to no hope of reproduction, become extirpated.

Alternative C, to translocate desert bighorn sheep to Eagle Crag from another source population, Marble Mountains Wildlife Area, was also considered and analyzed. Impacts are similar to those under Alternative B but more magnified to the Marble Mountains herd. Because it is smaller than the Old Dad/Kelso Peak herd, the Marble Mountains herd would likely have a longer period of recovery from culling.

Four other alternatives that were carefully considered by the National Park Service (NPS) but rejected from full analysis in the EA are:

Translocate sheep from the Clark Mountain herd to Eagle Crag. This option was eliminated because of the small size of the Clark Mountain herd and potential for significant impacts to that herd.

Increase fertility of Eagle Crag herd. This option is prohibitively expensive, especially under the current economy in California and limited State funds.

Two other potential alternatives, translocate Eagle Crag herd to Old Dad, and translocate even numbers of males and females, cannot be scientifically justified.

**Mitigation Discussion** - Desert bighorn sheep (*Ovis Canadensis nelsoni*) are not federally or State protected. The desert bighorn subspecies is the only bighorn sheep legally hunted in California.

Mitigation strategies and other safeguards which Mojave NP will observe pertaining to project oversight, operations safety, wildlife, wilderness, and helicopter and pilot operations, communication, and safety are articulated in the EA for this project, and are summarized as follows:

- CDFG-authorized personnel will blindfold each ewe upon capture to calm them during transportation and tagging operations. A veterinarian will be on-site to monitor the animals' health and well-being.
- A minimum requirement analysis was completed as part of the environmental assessment. Aerial operations over Wilderness areas will usually be confined to weekends. Notification of aerial operations over Wilderness will be provided to the public through the park website, press releases, and at the park visitor centers. The base of operations will all be located outside Wilderness. All ground support vehicles would be restricted to existing access roads, outside of the designated Wilderness. All drop-net trapping locations would be located outside designated Wilderness in desert washes or previously disturbed areas.
- All aerial operations would be conducted in accordance with applicable state and federal laws and policies. Only qualified and trained individuals would be permitted on the aerial operations. The capture operation will be contracted by CDFG to their prime contractor,

Hawkins and Powers. Trained contractors will affix the radio collars in the field at the point of capture. The survey work will be conducted by CDFG utilizing their helicopter and pilots.

- CDFG will conduct its own safety meeting to include personnel actively involved in the pursuit and capture of animals. Additionally, personnel that will be handling animals will be experienced in those activities, and will receive additional instructions regarding placement of animals in shipping boxes.

- All aspects of fuel storage and handling will be in compliance with OAS 351 DM: Aviation fuel handling. When refueling, the helicopter shall remain a distance of at least 300 feet or more from animals, vehicles (other than the fuel truck), and personnel not involved in refueling. Refueling will occur at the Baker airport or at the base camp.

- Helicopter operations will be consistent with CDFG air operations policies as outlined in the CDFG Operations Manual. Check-in periods will be no longer than 30 minutes, and the aircraft likely will be in sight the majority of the time.

- Helicopter safety will be given the strictest priority. All personnel taking part in the aerial or ground portion of the operation will be provided a safety briefing and the appropriate training, prior to the operations, including:

- a. Keep clear of helicopter rotors. Stay away from the rear of the helicopter.
- b. Approach from the front or side, but never out of the pilot's line of vision.
- c. Do not approach the helicopter until the pilot indicates you may do so.
- d. Do not approach the helicopter from any side where the ground is higher.
- e. Hold firmly onto loose articles.
- f. Never reach up or run after articles that may have blown away.
- g. Protect eyes from blowing dust by wearing protective goggles or glasses.
- h. During take off, landings and hovering operations, ground crew will stay at least 200 feet away from the helicopter.
- i. If blinded by dust or debris, stop, crouch low or sit down and wait for help.
- j. Allow helicopter personnel to load the tools.

**Why the Selected Alternative will not have a Significant Effect** - Translocation of desert bighorn ewes from Mojave NP to the Naval Air Weapons Station at China Lake (NAWS) will have short- to medium-term adverse impacts to the Old Dads/Kelso Peak herd but these impacts are temporary in nature, localized, and recoverable and are, therefore, not considered significant. The potential benefit to the Eagle Crags herd outweighs these minor impacts.

The project component in Mojave NP is situated within designated wilderness. Impacts to wilderness will be temporary, lasting only for the duration of the helicopter capture operation. The desert bighorn herd in the Old Dad/Kelso Peak area is expected to recover in the short to medium term. The survival of the Eagle Crags herd will be greatly improved by the Selected Alternative; such benefits outweigh the short-term, transitory adverse impacts to wilderness in Mojave NP.

The potential impacts to the Old Dad/Kelso Peak herd are predictable and minor and do not involve highly uncertain or unique or unknown risks. The potential impacts to the Eagle Crags herd are not fully known but are not expected to be detrimental.

The selection of Alternative B allows for a one-time translocation of ewes from Mojave NP to NAWS at China Lake. Any future actions by Mojave NP to manage the desert bighorn population must be preceded by the completion of a desert-wide bighorn sheep management plan. Such a plan would address bighorn sheep management throughout the California Desert including, but not limited to, Mojave NP and the Naval Air Weapons Station at China Lake.

The capture activities will be conducted in the Old Dad/Kelso Peak area of Mojave NP. This area is within designated wilderness. It is not known to contain culturally significant resources. The Selected Alternative was found to meet the conditions for a programmatic exclusion under the 1995 Servicewide Programmatic Agreement for Section 106 Compliance, Exclusion IV.B.1, and further consultation under 36 CFR is not needed.

The Selected Alternative will take place outside of desert tortoise critical habitat. No endangered or threatened species are known to occur in the project area. Alternative B will, therefore, not adversely affect any threatened, endangered or sensitive species.

Public health and safety would not be affected by implementing these actions. The three alternatives presented in the EA were mutually agreed upon by Department of Defense, CDFG and NPS officials. The Preserve received one response during the public review period. Neither the proposal nor alternatives are related to other actions that may have individually insignificant impacts, but cumulatively significant effects. Cumulative effects are those impacts of any State and private actions that are reasonably certain to occur in the project area in the future. CDFG conducts on-going monitoring, maintenance and repairs of six big game guzzlers in Mojave NP for use by desert bighorn. Desert bighorn sheep have been translocated from the Old Dad/Kelso Peak area several times in the past 30 years. No adverse effects were documented by CDFG for any translocation effort. It is, therefore, expected that the Selected Alternative will similarly result in no adverse effects to the bighorn. Implementation of the Selected Alternative may reduce wildlife use of these artificial watering facilities in the short-to-medium term. The NPS is not aware of any other local, state or private actions that may affect desert bighorn in Mojave NP. The NPS does not have any planned management activities for desert bighorn. The proposal does not threaten to violate any federal, state, or local law or requirements imposed for the protection of the environment.

**No Impairment of Preserve Resources and Values** - The NPS must consider the potential impacts of each alternative and the implications for impairment to the resources of Mojave NP. The Organic Act of 1916 and its amendments require that the:

[ National Park Service] shall promote and regulate the use of the Federal areas known as national parks, monuments, and reservations hereinafter specified. . . by such means and measures as conform to the fundamental purpose of the said parks, monuments, and reservations, which purpose is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations. (16 USC 1)

NPS managers must always seek ways to avoid or minimize to the greatest degree possible adverse impacts on park resources and values. Through this law and the General Authorities Act, NPS managers have the discretion to allow impacts to park resources and values when necessary and appropriate to fulfill the purposes of a park, as long as the impact does not constitute impairment of the affected resources and values. Although Congress has given the NPS management discretion to allow certain impacts within parks, that discretion is limited by the statutory requirement that the NPS must leave park resources and values unimpaired, unless a particular law directly and specifically provides otherwise.

The prohibited impairment is an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of park resources or values, including opportunities that otherwise would be present for the enjoyment of those resources or values. An impact to any park resource or value may constitute impairment. However, an impact would more likely constitute impairment to the extent it affects a resource or value whose conservation is:

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
- key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- identified as a goal in the park's GMP or other relevant NPS planning documents.

Impairment may not result from NPS activities in managing the resources, visitor activities, or activities undertaken by concessionaires, contractors, and others operating in the park.

The impacts identified as resulting from implementation of the Selected Alternative are temporary in nature and can be mitigated or recovered. Take of desert bighorn sheep is always a possibility in bighorn management activities. All efforts will be made to avoid or mitigate such impacts. Licensed veterinarians specializing in wildlife biology will be onsite at all times during the operation. A reduction in the Old Dad/Kelso Peak herd will be kept small enough to allow the herd to recover within the medium term.

Safety to both wildlife and humans will be given the highest priority in and around the helicopters. As described above, every precaution will be taken to ensure the safety of everyone involved.

Minimizing or avoiding impacts to wilderness have been addressed in the Minimum Requirements analysis documented in the EA. Those impacts identified are temporary in nature and necessary for the implementation of the Selected Alternative.

None of these or any other impacts identified in the EA will result in significant or irreparable damage to the resources of Mojave NP. It is, therefore, concluded that impairment will not result from implementation of the Selected Alternative.

**Public Review and Consultations** - The EA concerning Translocation of Desert Bighorn Sheep from Mojave National Preserve to the Naval Air Weapons Station, China Lake, California, was released for public review November 7, 2005. The EA was available for formal public review for 36 days, until December 12, 2005. No public meetings or hearings

were conducted. EA documents were direct mailed to 38 groups (although no requests for EAs were received during the public review period). A total of 80 press releases were mailed to libraries, newspapers, and other appropriate outlets. Two native American tribes received copies of the EA.

One letter responding on the EA was received from the Southwest Center for Biological Diversity. Its main points and responses from California Department of Fish and Game (CDFG) are listed below:

Comment: The Center requests information regarding the type of aerial census performed, the timeframe, and the confidence limits of the bighorn population estimate.

Response: Aerial census was performed by experienced observers and an experienced pilot using a Bell 206B Jet Ranger helicopter. In 2003 the entire Eagle Crags was surveyed as was Robber's Mountain, west of the Eagle Crags. Additionally, an extensive amount of survey time was expended at Brown Mountain, and in the south end of the Slate Range, in an attempt to locate additional animals. The survey was conducted at a rate of approximately 1 minute/km<sup>2</sup>, as is the case with the majority of aerial mountain sheep surveys throughout California. The population was not estimated; minimum numbers of animals (17 males, 2 females) observed were reported.

Comment: With respect to the Eagle Crags bighorn population survey in 1990, what specifically is meant by the term "normal array" concerning the number and sex ratio of the animals occupying the area? Could this be simply an opinion of the CDFG?

Response: Non-harvested mountain sheep populations typically exhibit a sex ratio of between 60 and 70 males per 100 females.

Comment: No information was provided on the success rate of the capture and relocation, such as number of animals captured; number of capture attempts; stress or mortality due to capture, handling and transport, etc. The Center requests that such information be provided as part of the NPS response.

Response: Twenty-five individuals were successfully captured and translocated to the Eagle Crags in December 1983. Sixteen individuals were successfully captured and translocated to the Eagle Crags in October 1987. No mortalities occurred during these capture events.

Comment: [Center] requests that the NPS and CDFG provide information regarding the status of the 41 released animals from the time they were released to the present.

Response: Telemetry collars on translocated bighorn ceased functioning >10 years ago. Given the expected life span of mountain sheep, all animals originally translocated likely are dead. Animals remaining in the range are the progeny of the translocated animals.

Comment: Has the CDFG or US Navy performed studies of the effects of aircraft operations and other forms of weapons testing on bighorn sheep in [Crags Mountains]?

Response: The mission of the [Weapons Center] is testing of electronic, rather than conventional, weapons. Animals at Old Dad Peak occupy an area used by military aircraft for training; the same is true in the Eagle Crags.

Comment: There are no assurances that the five to 13 female sheep to be captured and released will remain in the Eagle Crag Mountains population. Of the 27 females released into this area in 1983 and 1987, plus any additional females naturally entering the population, only two were believed to reside in the area.

Response: There is no guarantee that females will remain. Only two females were detected in the areas surveyed, however, creating concern that the sex ratio could be very biased toward males. Additional females will help to better understand the distribution of female sheep, and to better define the sex ratio in the Eagle Crag by helping to locate other females.

Comment: What changes have occurred in [Crag Mountains] since the 2003 herd count that would lead NPS and CDFG to think that "augmentation" would produce the desired outcome?

Response: No changes are known to have occurred; such a skewed sex ratio could be the result of random chance. Additional telemetered females in the Eagle Crag will enhance the probability of locating other, non-collared females because mountain sheep segregate by sex during the majority of the year. Locating additional females is a stated goal and a desired outcome of this translocation.

Comment: The EA indicates that between 1983 and 1992, over 200 individual bighorn were captured from the Old Dad Peak area and released in other mountain ranges. The Center considers the assessment inadequate with respect to the cumulative impact to bighorn resources in the Preserve and adjacent habitat as a result of over 200 bighorn being removed from the Old Dad Peak area over a nine year period beginning in 1983. This needs to be carefully addressed using credible data, scientific analysis and participation by respected conservation biologists.

Response: This issue is addressed on an annual basis, using current data and analyses, and involves participation by several CDFG biologists. There is no evidence of any demographic impact to the population at Old Dad Peak.

Comment: Does aggressive capture and removal of bighorn disrupt natural movement of individual bighorn to other suitable habitats within and adjacent to the Preserve?

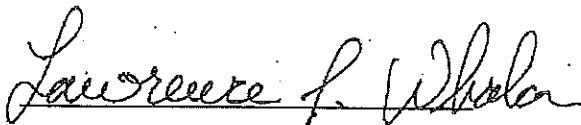
Response: Female mountain sheep are extremely philopatric, and do not colonize new areas, and movements by females between mountain ranges seldom occur. Movements among mountain ranges are made largely by males, often during rut, but do occur more frequently than those made by females. Thus, the probability of movements being disrupted by capture activities is low. Additionally, there is no evidence that capture activities have resulted in movements by mountain sheep to areas outside of the Old Dad ecosystem, nor is there is evidence suggesting that previously captured animals became acclimated or sensitized to the presence of a helicopter that previously captured mountain sheep may begin moving when a helicopter enters an area, but experiments indicated that no animals leave the study area in response to survey or capture activities.

The Selected Alternative was found to meet the conditions for a programmatic exclusion under the 1995 Service-wide Programmatic Agreement for Section 106 Compliance, Exclusion IV.B.I, and further consultation with the SHPO under 36 CFR is not needed.



**Conclusion** - Based on the analysis in the EA, the capability of mitigation measures to reduce or eliminate potential adverse impacts, and with due consideration for public comment, the NPS in concert with CDFG has determined that the selected alternative does not constitute a major federal action significantly affecting the quality of the human environment. Therefore, in accordance with the National Environmental Policy Act of 1969 and the regulations of the Council of Environmental Quality (40 CFR 1500-1508) an environmental impact statement will not be prepared and the proposed action may be implemented at any time in the future.

**Recommended:**




Lawrence J. Whalon

ACTING Superintendent, Mojave National Preserve

12/22/05

Date

**Approved:**



Jonathan B. Jarvis

Regional Director, Pacific West Region

12/23/05

Date

